

Appln No. 09/838,695

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Reply to Office action of February 7, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for producing a perceptible representation of data, comprising:

an arbiter

(a) selecting a dominant program from among a plurality of programs seeking a master persistence attribute to display data of the program according to a predetermined priority technique, and

(b) assigning the master persistence attribute to the dominant program,

wherein the dominant program displays data concurrently with other programs while not being obscured by the other programs and while overlapping at least one of the other programs.

2. (Original) The apparatus of claim 1, further comprising:

an access control table, coupled with the arbiter, containing indicia representative of the predetermined priority scheme.

3. (Original) The apparatus of claim 2, further comprising:

a configuration application program, coupled with the

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access control table, configuring the arbiter with the predetermined priority scheme.

4. (Original) The apparatus of claim 1, further comprising:

an I/O manager, coupled with the arbiter, communicating the display data between an application program and a display.

5. (Original) The apparatus of claim 4, further comprising:

a graphics device driver, coupled with the I/O manager and the display, to transmit the display data to the display.

6. (Original) The apparatus of claim 1, further comprising:

a graphics device driver, coupled with the arbiter, to transmit the display data to the display.

7. (Original) The apparatus of claim 2, wherein the indicia include one of process ID (PID), window ID (WID), priority, revoked and repudiated credentials, authentication token or key, master persistence attribute authorization, descriptive text, program status, system status, an accessible display region, and an excluded display region.

8. (Original) The apparatus of claim 1, wherein the arbiter further comprises one of a rules engine, a state machine, and a content-addressable memory that provides the

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predetermined priority scheme for determining dominant program priority.

9. (Original) The apparatus of claim 6, further comprising a gatekeeper determining selected ones of the plurality of programs to be granted access to the arbiter to receive a master persistence attribute according to a predetermined access scheme.

10. (Currently Amended) A graphic display apparatus, comprising:

a gatekeeper determining selected ones of a plurality of programs to be granted a key to request a persistence attribute according to a predetermined access scheme, the persistence attribute enabling a program upon receipt to display data concurrently with other programs while not being obscured by the other programs and while overlapping at least one of the other programs.

11. (Original) The graphic display apparatus of claim 10, further comprising:

a graphics device driver, coupled with the gatekeeper, that couples display data of the selected ones with a display.

12. (Original) The graphic display apparatus of claim 11, further comprising:

an arbiter

(a) selecting a dominant application program from among

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the selected ones seeking the master display persistence attribute, and

(b) assigning the master persistence display attribute to the dominant program.

13. (Original) The graphic display apparatus of claim 12, further comprising:

an access control table, coupled with the arbiter, storing indicia representative of the predetermined priority scheme.

14. (Original) The graphic display apparatus of claim 10, further comprising:

an I/O manager, coupled with the gatekeeper, managing graphical data between the selected ones and a display.

15. (Original) The graphic display apparatus of claim 10, further comprising:

an application manager, coupled with the gatekeeper, preventing unauthorized access to an operating system by the selected ones.

16. (Original) The graphic display apparatus of claim 15, further comprising:

a graphics device driver, coupled with the application manager, to transmit graphical data to display data on the display.

17. (Original) The graphic display apparatus of claim 10,

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further comprising:

a configuration application program, coupled with the gatekeeper, configuring the gatekeeper with the predetermined priority scheme.

18. (Original) The graphic display apparatus of claim 10, further comprising:

a configuration table, coupled with the gatekeeper, storing an indicia representative of the predetermined priority scheme.

19. (Original) The apparatus of claim 18, wherein the indicia include one of process ID (PID), window ID (WID), priority, revoked and repudiated credentials, authentication token or key, master persistence attribute authorization, descriptive text, program status, system status, an accessible display region, and an excluded display region.

20. (Currently Amended) A graphic display apparatus comprising:

(a) a gatekeeper determining selected ones of a plurality of programs to be granted a master persistence display attribute according to a predetermined access technique, and

(b) an arbiter;

(1) selecting a dominant program from among the selected ones seeking the master persistence display attribute, and

(2) assigning the master persistence attribute to the dominant program according to a predetermined priority

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technique,

wherein the dominant program displays data concurrently with other programs while not being obscured by the other programs and while overlapping at least one of the other programs.

21. (Original) The graphic display apparatus of claim 20, further comprising:

one of a configuration table, coupled with at least one of the arbiter and the gatekeeper, containing first indicia representative of a predetermined priority scheme, and an access control table, coupled with at least one of the arbiter and the gatekeeper, containing second indicia representative of a predetermined priority scheme.

22. (Original) The graphic display apparatus of claim 20, further comprising:

a configuration application, coupled with at least one of the configuration table and the access control table, configuring at least one of the arbiter and the gatekeeper.

23. (Original) The graphic display apparatus of claim 19, further comprising:

an I/O manager, coupled with at least one of the arbiter and the gatekeeper, for communicating the display data between an application program and a display.

24. (Original) The graphic display apparatus of claim

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23, further comprising:

a graphics device driver, coupled with the I/O manager and the display, that transfers the display data to the display.

25. (Original) The graphic display apparatus of claim 24, further comprising:

a display buffer coupled with the graphic display driver.

26. (Original) The graphic display apparatus of claim 20, further comprising:

a graphics device driver, coupled with at least one of the arbiter and the gatekeeper, that transfers display data to a display.

27. (Original) The graphic display apparatus of claim 26, further comprising:

a display buffer coupled with the graphic display driver.

28. (Original) The graphic display apparatus of claim 26, further comprising:

an I/O manager, coupled with the graphic display driver, communicating between an application program and the display.

29. (Original) The graphic display apparatus of claim 20 further comprising:

an application manager, coupled with at least one of the gatekeeper and the arbiter, preventing unauthorized access to an operating system by a program.

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30. (Original) The apparatus of claim 21, wherein at least one of the first indicia and the second indicia include one of process ID (PID), window ID (WID), priority, revoked and repudiated credentials, authentication token or key, master persistence attribute authorization, descriptive text, program status, system status, an accessible display region, and an excluded display region.

31. (Currently Amended) A graphics system, comprising:

- a. a video input receiving a graphical data signal;
- b. a video output coupled with a display;
- c. a display controller coupled with the video input signal and selectively transmitting the graphical data signal to the video output; and
- d. an arbiter coupled with the display controller, the arbiter effecting the selectively transmitting by granting a persistence attribute according to a predetermined priority scheme to a window for displaying data on the display, the display controller selectively transmitting responsive to the arbiter,

wherein the video output writes data to a set of pixel memory locations which are later read by the display, and

wherein a window which has been granted the persistence attribute by the arbiter has exclusive access to a portion of the set of pixel memory locations in place of at least one other window which would otherwise have access to the portion of the set of pixel memory locations.

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32. (Original) The graphics system of claim 31, further comprising a CPU interface for coupling the graphics system to a CPU, the CPU receiving display control signals and the arbiter being responsive thereto.

33. (Original) The graphics system of claim 32, wherein the CPU includes a gatekeeper, the gatekeeper operably coupled with the arbiter and transmitting the predetermined priority scheme thereto.

34. (Original) The graphics system of claim 32, wherein the CPU includes a gatekeeper, the gatekeeper operably coupled with the arbiter and selecting display control signals having access to the arbiter.

35. (Original) The graphics system of claim 34, further comprising an arbiter access control table configured to receive indicia relevant to the priority scheme.

36. (Previously Presented) The graphics system of claim 35, wherein the indicia include one of process ID (PID), window ID (WID), priority, revoked and repudiated credentials, authentication token or key, master persistence attribute authorization, descriptive text, program status, system status, an accessible display region, and an excluded display region.

37. (Currently Amended) A method of assigning a

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persistence attribute to at least one of a plurality of dominant programs, comprising:

(a) requesting the master persistence attribute from a gatekeeper;

(b) assigning a set of priority rules to the gatekeeper via a configuration application program;

(c) the gatekeeper granting keys to selected dominant application programs allowing access to an arbiter;

(d) the arbiter examining an arbiter access control table storing the predetermined priority scheme; and

(e) the arbiter assigning the persistence attribute to the at least one of a plurality of dominant application programs granting access to a display window,

wherein at least one of the plurality of dominant application programs displays data concurrently with other programs while not being obscured by the other programs and while overlapping at least one of the other programs.

38. (Currently Amended) A computer program product recorded on a computer readable medium for assigning a master persistence attribute to at least one of a plurality of programs, comprising:

(a) computer readable program code by which a gatekeeper grants an access token to selected programs allowing access to an arbiter according to a predetermined access scheme; and

(b) computer readable program code by which the arbiter assigns the master persistence attribute to a dominant one of the selected programs thereby granting access to a preselected

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display window,

wherein the dominant program displays data concurrently with other programs while not being obscured by the other programs and while overlapping at least one of the other programs.

39. (Original) The computer program product of claim 38, further comprising computer readable program code by which the arbiter examines an arbiter access control table storing the predetermined priority scheme.

40. (Original) The computer program product of claim 39, further comprising computer readable program code which assigns a set of access rules to the gatekeeper and assigns a set of priority rules to the arbiter, via a configuration application program.

41. (Currently Amended) A method of assigning a master persistence display attribute to at least one of a plurality of dominant application programs comprising:

(a) requesting the persistence attribute from a gatekeeper;

(b) the gatekeeper accessing a configuration table storing a predetermined priority scheme;

(c) the gatekeeper granting keys to selected dominant application programs;

(d) the selected dominant application programs applying the keys to access an arbiter which examines an arbiter access

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control table storing a predetermined priority scheme; and

(e) the arbiter assigning the master persistence display attribute to the at least one of a plurality of dominant application programs granting access to a display window,

wherein at least one of the plurality of dominant application programs displays data concurrently with other programs while not being obscured by the other programs and while overlapping at least one of the other programs.

42. (Currently Amended) An apparatus for producing a perceptible representation of data, comprising an arbiter that selects a dominant program from among a plurality of programs seeking a master persistence attribute to display data of the program according to a predetermined priority technique, and assigns the master persistence attribute to the dominant program,

wherein the perceptible representation of data is rendered on one of a computer, a communication pad, a telephony device, a handheld remote control device, and a handheld computing device, and

wherein the dominant program displays data concurrently with other programs while not being obscured by the other programs and while overlapping at least one of the other programs.

43. (Original) The apparatus of claim 42 wherein the medium by which data is communicated to the apparatus includes

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one of a wireless/RF channel, a wire-based channel, a cable-based channel, and a fiberoptic channel.